# Article information:

InAs/InAs1−xSbx type-II superlattices for high performance long wavelength infrared detection: Applied Physics Letters: Vol 105, No 12
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# Article summary:

1. High performance long-wavelength infrared nBn photodetectors based on InAs/InAs1−xSbx type-II superlattices on GaSb substrate have been demonstrated.

2. The photodetector with a 6 μm-thick absorption region exhibited a peak responsivity of 4.47 A/W at 7.9 μm, corresponding to a quantum efficiency of 54% at −90 mV bias voltage under front-side illumination and without any anti-reflection coating.

3. The photodetector exhibited a specific detectivity of 2.8 × 1011 cm·Hz/W.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides detailed information about the performance of the InAs/InAs1−xSbx type-II superlattices for high performance long wavelength infrared detection, including its peak responsivity, quantum efficiency, dark current density, and specific detectivity. The article also provides evidence for its claims in the form of data from experiments conducted on the device.

However, there are some potential biases that should be noted in the article. For example, the article does not mention any potential risks associated with using this technology or any possible counterarguments to its claims. Additionally, it does not present both sides equally; instead it focuses solely on the positive aspects of this technology without exploring any potential drawbacks or limitations that may exist. Furthermore, there is no discussion of alternative technologies that could be used for similar purposes or how this technology compares to them in terms of performance and cost effectiveness.

In conclusion, while this article is generally reliable and trustworthy in terms of providing evidence for its claims and discussing the performance of the device in detail, there are some potential biases that should be noted when evaluating its trustworthiness and reliability.

# Topics for further research:

* Alternative technologies for long wavelength infrared detection
* Potential risks associated with InAs/InAs1−xSbx type-II superlattices
* Cost effectiveness of InAs/InAs1−xSbx type-II superlattices
* Comparison of InAs/InAs1−xSbx type-II superlattices to other technologies
* Limitations of InAs/InAs1−xSbx type-II superlattices
* Counterarguments to claims about InAs/InAs1−xSbx type-II superlattices

# Report location:

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